

(Per ILA Approval Requirements)

☐ **CA Approval**

☒ **JB Approval**

REGIONAL FARE COORDINATION SYSTEM

CHANGE ORDER NO. 49

CONTRACTOR: Vix Technology (USA) Inc (Formerly ERG Transit Systems (USA))

CONTRACT NUMBER: 229944

This Change Order to Contract #229944 ("Change Order") is executed as of JAN 25, 2013, by and between Vix Technology (USA) Inc (formerly known as ERG Transit Systems (USA) Inc), a California corporation and wholly owned subsidiary of Vix Mobility Pty Ltd, an Australian corporation, (hereinafter referred to as the "Contractor") and each of the following seven public transportation agencies (hereinafter referred to individually as an "Agency" or collectively as the "Agencies"):

1. Central Puget Sound Regional Transit Authority ("Sound Transit")
2. King County ("King County")
3. Kitsap County Public Transportation Benefit Area ("Kitsap Transit")
4. Pierce County Public Transportation Benefit Area ("Pierce Transit")
5. Snohomish County Public Transportation Benefit Area ("Community Transit")
6. City of Everett ("Everett")
7. State of Washington, acting through the Washington State Department of Transportation, Washington State Ferries Division ("WSF")

Background

- A. Effective April 29, 2003, each of the Agencies and the Contractor entered into Contract #229944 ("Contract") to implement a Regional Fare Coordination System ("RFC System") to establish a common fare system utilizing smart card technology. The Contractor is responsible for the development, implementation, operation and maintenance of the RFC System as specified in the Contract.
- B. The Agencies desire a modified version of the Customer Service Terminal (CST) device that is suitable for use in the field via wireless communication, herein referred to as the Wireless Portable CST (WPCST).
- C. The Contractor performed a Preliminary Analysis of the Work needed to provide a WPCST (per Amendment 129 *ST Wireless Portable CST for Off-Site Use PA*) and produced a report describing the functional and other requirements for said device and describing the Work needed to develop same (SEA-07270 PA-ROF RFCS RFI 630 *Wireless Portable CST for Off-site Functionality – v5.0*).

D. The Agencies and the Contractor desire to execute this Change Order No. 49 and the attached Amendment 211 to: **(1)** modify the Contract Section Division 6.III – 11 Customer Service Terminal, deleting Contract Section 6.III-11.10.2 Portable CST Application (Option), which has now been incorporated into Section 6.III-11, and adding the requirements for the Wireless Portable CST(WPCST); and **(2)** specify the work to be performed to develop and test the WPCST; and **(3)** amend Exhibit 9, Price Schedule to add the compensation for the development and testing work described here in.

Changes

The Agencies and the Contractor hereby agree to the following changes to the Contract:

1.0 Description of Work

1.1 The Contractor will perform all the work necessary to develop a version of the CST application software for installation on a commercially available laptop computer and integrate all of the WPCST equipment and software to meet the requirements as described in Section 6.III-11, as modified below in Section 2.

1.2 The Contractor will perform the necessary tests to ensure that the software meets the requirements as described in Section 6.III -11as modified below in Section 2. Such tests will include, but not be limited to the following:

- (a) Perform successful Functional Acceptance Testing to ensure WPCST coded changes work per the agreed upon requirements
- (b) Perform successful System Integration Testing to ensure the WPCST coded changes, which tested successfully in item 1.2 (a) above, function seamlessly with the overall RFCS functionality.

1.3 The Contractor will update all necessary system documentation changes which includes the following:

- (a) SEA-00105 System Architecture
- (b) SEA-00045 Customer Service Terminal (DR 108)
- (c) SEA-00100 System Security Plan (CDRL 31)
- (d) SEA-02327 CDRL 17.108 CST Installation and Commissioning Procedures
- (e) SEA-02328 CDRL 22.108 Part E and H CST Installation and Commissioning Test Procedure
- (f) SEA-05453 SB0003 Consumable Supply List
- (g) SEA-00833 RFCS Reporting Requirements (DR 111)

1.4 The Contractor will modify all affected Reports to include, but not be limited to the following:

3.2 The Contractor will modify the Reports as noted below:

- (a) Device Inventory
- (b) Device Faults
- (c) Device Warranty
- (d) ORCA FRT

2.0 Contract Changes

2.1 Section 6.III-11, Customer Service Terminal, is amended to read as follows:

6.III-11 Customer Service Terminal (CST) & Wireless Portable Customer Service Terminal (WPCST). As specifically noted, the below requirements support the CST Application loaded on both device types, or, if the requirement supports only one of the devices, the device type is called out separately as either the CST and WPCST

6.III-11.1 Subsystem Description - CST

The CST (DR 108) shall provide the capabilities necessary for supporting the RFCS through the Agency's customer service offices, for mail and phone inquiries and for remote customer outreach performed in the field using the WPCST. The Customer Service Terminal (CST) shall at a minimum provide the following customer service capabilities:

- (a) Initialize and issue all types of fare cards.
- (b) Encode personal data onto fare card and record it in the RFCS database by creating a new customer record (ORCA Account).
- (c) Using the CST, process, at a minimum, payment by cash; credit and debit cards, electronic vouchers, checks, requisitions and purchase orders. Revalue fare cards with fare value from any Agency.
- (d) Using a WPCST, process, at a minimum, payment by cash, electronic vouchers, checks, requisitions and purchase orders. Record the credit and debit card transaction authorization code and the last four (4) digits of the credit card. Revalue fare cards with fare value from any Agency.
- (e) Process refunds and replace fare cards.
- (f) Show remaining value and pass status of card.
- (g) List the last ten (10) fare card transactions.
- (h) Block fare cards
- (i) Unblock fare cards that have been blocked.
- (j) Provide a transaction history on each fare card by accessing the clearinghouse database, and ability to print duplicate receipts at the time of the sale.
- (k) Print receipt for each transaction or inquiry of remaining value.
- (l) Enroll customers in the Autoload program.
- (m) Disable a customers' participation in the Autoload program
- (n) Register a fare card

- (o) Unregister a non-youth or non-RRFP fare card
- (p) Support the sales of non-RFCS products

6.III-11.2 Functional Requirements - CST

- (a) The CST Application shall provide a means of quickly selecting “express transaction” types for the most common types of card values loaded.
- (b) The CST Application shall be able to read and encode on the fare card for the initial sale and subsequent revalue actions any value up to the maximum limit, load any pass or type of ride for any Agency.
- (c) The Agency personnel shall be able to initiate the type of transaction by selecting the type of value to be loaded for a selected Agency, and origin-destination or zones if applicable.
- (d) Agency personnel shall be able to cancel a transaction at any point during the purchasing process prior to the initiation of the transfer of value to fare card.
- (e) The CST shall prompt Agency personnel to select the applicable payment type.
- (f) A transaction receipt may be printed at the CST upon request for any type of payment except when processing credit or debit transactions at a WPCST. CSTs for WSF shall print receipts for every transaction by default.
- (g) Upon the completion of the transaction selection, the CST shall calculate and display the amount due for the selected card value loaded on the operator display as well as the external customer card interface unit display.
- (h) On the same CST and shift that the original transaction occurred, the CST Application shall be able to reverse the value that has been loaded on a fare card and provide an audit trail of who reversed it, including time date and terminal ID.
- (i) The CST Application shall provide mid-shift and end of shift accounting.
- (j) At the end of a sales day, the CST Application shall provide a daily summary report indicating total sales, revenue collected, passes sold, amounts of refunds issued and the number of refunds.
- (k) The daily orders received and orders filled shall be transferred to and from the clearinghouse at least once per day per Agency for the CST. For the WPCST such action will vary based on Agency provided network connectivity available to the device.
- (l) The CST shall support telephone, Internet and mail order services. The WPCST shall support Wireless Internet services only.
 - i. All CST telephone, Internet and mail orders filled shall be tracked on a daily basis.
- (m) The CST Application shall provide provisions for entering customer information including name address, phone number and ID number.

- i. The CST shall have functionality to generate customer numbers.
 - ii. The CST shall have functionality to utilize Agency-specified customer numbers.
 - iii. The CST shall have the capability to track transactions by customer number, transaction numbers, or card serial numbers.
 - iv. The CST shall allow Agency personnel to override the standard card fee, and track and report each override event.
 - v. All CSTs, revalue and information devices/systems shall reference the same customer identification information record, to avoid duplication of records for a specific customer.
- (n) The CST Application float shall be the same for the CST and WPCST
 - (o) The CST Application shall record payment method or methods for each sales transaction.
 - (p) The CST shall be capable of operating commercial off-the-shelf software such as word processing and spreadsheet programs concurrent with CST functions.
 - (q) CST peripherals shall be modular.
 - (r) The Agencies shall have the option of procuring:
 - i. A fully configured CST designed for over the counter service
 - ii. The CST components as described in Exhibit 9, Price Schedule.
 - iii. The WPCST commercially available laptop computer
 - (s) The CST via the MS Retail Application shall provide a report identifying inventory quantities on hand, quantities sold, and quantities added during the day
 - (t) The CST shall provide the ability to override card printing requirements when issuing a Regional Reduced Fare Permit card.

11.2.1 Cash Sales

- (a) The CST Application shall recognize cash as the default payment method.
- (b) The CST operator shall enter the amount received into the CST Application using the keyboard (the default value, obtained by pressing enter, shall be the amount due from the customer for the current transaction) and the CST Application shall encode the fare card.
- (c) In the case of overpayment, the CST Application shall calculate the change due to the customer, display the corresponding amount on the CST operator interface screen.
- (d) Cash change shall be provided by the operator via the CST cash drawer.

11.2.2 Check, Purchase Order, or Money Order Sales

- (a) Upon receipt of a money order, purchase order (PO) or check for payment, the operator shall either scan the payment through the electronic check reader or manually enter the payment number into the CST Application using the keyboard.
- (b) The CST Application shall provide the following features when processing checks and POs:
 - i. The CST Application shall prompt Agency personnel to enter current ID, such as drivers license and expiration date.
 - ii. The CST Application shall have the ability to endorse checks and POs electronically listing the deposit information on the back of the payment, at the time the sale is made.
 - iii. The system shall have the ability to create a bad check file.
- (c) The check number shall be verified against the "bad check" and "accepted corporate check/purchase order" files resident in the CST Application.
- (d) For POs or other billing accounts, the CST Application shall record as a minimum:
 - i. Company or organization
 - ii. Billing address
 - iii. Payor contact
 - iv. Payor reference number (alphanumeric)
 - v. Agency reference number (alphanumeric)
 - vi. Notes
 - vii. Special handling instructions
 - viii. Ship-to address
 - ix. Payor telephone number
- (e) Upon local verification of the check/PO at the CST, the CST Application shall send a message to the clearinghouse requesting check transaction authorization.
- (f) Such check transactions shall be processed in a manner similar to electronic payment transactions. Upon receipt of authorization, the CST Application shall notify the Customer Service Representative (CSR) of the check/PO authorization number and transfer value to the fare card.
- (g) Bad check and accepted corporate check/PO files shall be updated at the clearinghouse and downloaded on a daily basis to the CSTs or as Agency network connectivity allows for the WPCST.
- (h) Check transaction processing shall be conducted in accordance with the requirements of the authorizing financial institution/network.

11.2.3 Telephone, Mail and Internet Fulfilment and Customer Service

- (a) The CST Application shall include functionality to provide telephone, mail and Internet Customer Service and Support in a “card not present” environment.
- (b) The CST Application shall include functionality to provide Institutional Program customer service in a “card not present” environment.
- (c) The CST Application shall generate local card fulfillment orders for Internet requests processed through the RFCS Internet Website operated by the Contractor on behalf of the Agencies.
- (d) Internet website orders shall be routed to an Agency or Agencies as defined by the Contract Administrator.
- (e) The CST Application shall include functionality to create packing slips and mailing labels. Print size and font type shall meet United States Postal Service (USPS) standards.

11.2.4 Electronic Payment (Credit/Debit Card) Transactions (CST)

- (a) The customer shall perform the following steps using an external customer card interface unit:
 - i. Swipe the card to be used for payment
 - ii. Select the type of electronic payment, i.e., credit or debit or card
 - iii. Enter the corresponding account PIN number and press “OK” (debit transactions only)
 - iv. Press “OK” to accept the amount to be charged to the corresponding account
- (b) The CST shall immediately receive the account information read from the card and the CST operator shall forward the transaction authorization request to the clearinghouse by depressing a hot key on the keyboard.
- (c) The remainder of the transaction shall be processed in a manner similar to that of electronic payment transactions at a TVM, with the exception that a duplicate transaction receipt with a signature line shall be automatically issued by the CST for all credit card transactions.
- (d) The signed receipt shall be retained in the CST cash drawer for transaction clearing purposes.
- (e) The CST shall contain provisions for the reversal of a credit/debit transaction when the transaction is canceled prior to ticket issuance or card encoding.
- (f) The processing of all credit and debit transactions shall conform to the requirements of ISO 8583

11.2.5 Electronic Payment (Credit/Debit Card) Transactions (WPCST)

- (a) The CST Application on the WPCST shall be modified to only recognize a request to pay by credit card
- (b) The CST Application on the WPCST shall be modified to only recognize a request to pay by debit card
- (c) The CST Application on the WPCST shall record the card type (MC, Visa, Debit), authorization code, and last 4 digits of the card number used

11.2.6 Fare Card Inventory Management

- (a) When a new fare card is initialized and issued the CST Application shall capture the serial number of the fare card for the clearinghouse.
- (b) The CST Application shall automatically track the card inventory of the Agency against the clearinghouse card inventory management file as fare cards are sold and initialized.

11.2.7 Customer Service Agent Sign-On/Off

- (a) For an Agent to sign on, the following procedure shall be followed. Additionally, the Agent shall be required to unlock the CST cash drawer with a key to gain access to the drawer. The Contractor shall provide to the Contract Administrator five (5) sets of all CST keys a minimum of 60 days prior to the delivery of the first CST.
- (b) Agent enters their PIN.
- (c) Agent tags their valid operator smart card. The CST Application shall compare the PIN encoded on the smart card with the PIN entered and the CST shall only be operable when the two match.
- (d) The CST Application shall be able to track incorrect Operator sign-on attempts, and shall block the Operator card after a configurable number of failed attempts.
- (e) The CST Application shall automatically record all operator sign-on and sign-off attempts. Locking the CST cash drawer shall have no effect on Agent's data. If an Agent has not signed off, the sign-on of a subsequent Agent shall cause an automatic sign-off for the first operator without loss of any data.
- (f) The Agent shall be able to key in the working cash fund that is available at the start of their shift and to have the CST Application keep a running balance throughout the shift by accounting for cash received for any cash sales.

11.2.8 CST Systems Administration Mode

Through commands entered using the Agent interface such as the keyboard or touch-screen, authorized maintenance and/or revenue service personnel shall be able to place the CST Application into Systems Administration Mode.

- (a) The CST Application shall have a maintenance and systems administration mode function.
- (b) When in Systems Administration Mode, the customer interface display shall read "Out-of-Service" and the operator interface shall be used to enter commands, perform queries, and receive information from the machine on both the monitor screen and on audit.
- (c) The CST Application shall not be capable of loading value onto a smart card when in the maintenance mode.
- (d) The CST Application shall return from the Systems Administration Mode to revenue service after servicing.

11.2.9 CST Training Mode

Through commands entered using the Agent interface such as the keyboard or touch-screen, authorized Agency personnel shall be able to place the CST Application into Training Mode.

- (a) In Training Mode, the CST Application shall simulate normal operation including actual display messages
- (b) In Training Mode the CST Application shall on be capable of loading value onto the cards issued as special Training Cards, and that these training cards cannot be used with the operational system.
- (c) A record from the time the CST Application entered Training Mode to the time returned to normal operation shall be created and transferred to the clearinghouse central system during the next scheduled data off load cycle.

11.2.10 Non-RFCS Sales

- (a) The CST Application shall have functionality to process, record and report the sales of non-RFCS products.
- (b) The CST Application shall have the ability to track the inventory of used, unused, sold, and on-hand non-RFCS products in the system by using barcode or manually entered serial numbers.
- (c) The CST Application shall provide local inventory and revenue reporting of the sale of non-RFCS products.
- (d) The CST Application shall provide a combined report of all revenue collected and payment methods used to support single deposit. Revenue

reports shall distinguish between RFCS and non-RFCS product sales, amounts and payment methods.

6.III-11.3 Performance Requirements - CST and WPCST

11.3.1 Reliability

- (a) The following reliability rates, Mean Transactions Between Failure (MTBF), shall apply for a high transaction volume environment: 10,000 MTBF.
- (b) Reliability shall be measured as follows:
 - i. For the CST, the reliability shall be 5000 Mean Operating Hours Between Failure (MOHBF) in a low transaction volume environment.
 - ii. For the WPCST, the reliability shall be 720 Mean Operating Hours Between Failure (MOHBF) in a low transaction volume environment
- (c) High and Low Volume Transaction environments are defined in Section 6.III-1.5.1 (a) and (b).
- (d) Any component or assembly within a CST that fails more than two (2) times per month shall be replaced with a new component or assembly.
 - i. If the new component or assembly experiences the same failure rate, the Contractor shall be responsible to initiate an investigation to determine the cause.
 - ii. Alternatively, failures shall average no more than two (2) failures per device type every 90 days for the total population for each type of CST in revenue service.

11.3.2 Availability (CST)

Availability shall be measured at a minimum for the following:

- (a) The CST shall be available to conduct a transaction 99.73% [σ σ (second sigma)] during operating hours.
- (b) Credit or debit card authorization shall be available as specified in Section 6.III-1.5.2, "Availability."
- (c) CSTs shall be available to transmit data upon request to the clearinghouse 99.73% [σ σ (second sigma)] during the scheduled time periods for these activities (refer to Section 6.III-1.5.2 "Availability").
- (d) Contractor shall provide a detailed plan that describes the methodology of capturing and processing the data to be used to measure availability (CDRL 39).

11.3.4 Accuracy

- (a) Accuracy shall be measured as shown below. Accuracy for all types of electronic payments is defined as the mean ratio of the transactions value recorded by the device as evidenced by the transactional data recorded to the actual transaction records received and processed by the clearinghouse:
 - i. For the CST, the electronic payment functions shall have an accuracy rate of 99.73% (σ σ sigma).
 - ii. For the WPCST, the electronic payment functions shall have an accuracy rate of 99.99% to 100.01%
- (b) The cash transaction functions shall have an accuracy rate of 99.5%.

Accuracy for the cash processing functionality is defined as the mean ratio of the moneys recorded as evidenced by the audit receipts produced by the device to the actual moneys in the bill and coin vaults as counted. Cash reconciliation differences attributable to beginning inventory shortages or loading errors shall be excluded. Differences attributable to counting errors shall also be excluded. Reconciliation differences shall be reported by relevant device within 24 hours.

6.III-11.4 Physical Requirements - CST

- (a) The full-function CST shall contain the modules listed in Figure III-11.1.
- (b) Agencies shall have the option of procuring CSTs with any combination of peripherals for mail, telephone or other applications that may not require all peripherals.
- (c) Agencies shall have the option of procuring additional peripherals as illustrated in Figure III-11.2

**Figure III-11.1
CST MODULE SUMMARY**

Module	CST Reference	WPCST Reference
CST CPU (DR 108.01)	X	
WPCST Ruggedized CPU		X
Magnetic Card Reader (DR 108.02)	X	
PIN pad (DR 108.03)	X	
Agent Display (DR 108.04)	X	
Customer Display (DR 108.05)	X	
Fare Card Reader/Writer (DR 108.06)	X	X
Keypad/board (DR 108.07)	X	
Printer-Receipt (DR 108.08)	X	X
Cash drawer (DR 108.09)	X	
Secure Access Module (SAM) (DR 108.12)	X	X

“X” denotes module required by Contract

**Figure III-11.2
CST – ADDITIONAL MODULES**

Module	CST Reference	WPCST Reference
Photo ID Equipment (DR 108.10) – camera & power supply	X	X
Card Dispensing Module (DR 108.11)	X	

11.4.1 Customer Service Terminal and Wireless Portable Customer Service Terminal

11.4.1.1 The Customer Service Terminal shall consist of:

- (a) CPU, based on the latest generation of Intel or Motorola microprocessor or approved equivalent and shall be configured with sufficient memory, data storage, and appropriate communications to meet the functional requirements defined for the terminal. Unless otherwise required for the provision of drive bays or interface cards, the CPU shall be supplied in a mini-tower configuration. If a larger housing is required to accommodate additional drive bays or interface cards, the CPU shall be supplied in a tower configuration.
- (b) Full function keyboard or touch screen interface.
- (c) Minimum 17 inch standard PC active matrix LCD monitor. The monitor shall be readable in all ambient light conditions, including both day and night. The display shall be subject to the review and approval of the Contract Administrator (DR 108.04). Due to space constraints at customer service offices, some Agencies may require 15 inch LCD monitors in lieu of 17 inch monitors. This will be determined at Preliminary Design Review (CDRL 2). The CST shall be designed to operate with either a 15 inch or 17 inch monitor.
- (d) Default selections on the key board or touch screen shall be provided to speed up the transaction process for commonly used transactions.
- (e) Receipt printer.

- (f) Locked cash drawer.
- (g) A customer display to provide the transactional information to the customer.
- (h) The CST interface shall be subject to Contract Administrator review and approval (DR 108.04).
- (i) Fare Card Reader/Writer
- (j) Printer-Receipt

11.4.1.2 The Wireless Portable Customer Service Terminal shall consist of:

- (a) Ruggedized laptop computer shall be configured with sufficient memory, data storage, and appropriate communications to meet the functional requirements defined for the WPCST.
- (b) Printer-Receipt
- (c) Fare Card Reader/Writer

Figure III-11-3

WPCST CPU Configuration

Item	Specification
a. Processor	Intel Core i5-2520M, 2.50GHz, 3MB Cache
b. Memory	4.0GB, DDR3-1333MHz SDRAM, 1DIMM
c. Hard Drive	250GB Hard Drive 7200RPM
d. Serial Ports	1 x RS232
e. USB Ports	5 ports (USB Hub)
f. Keyboard and Mouse	USB or wireless (optional)
g. Network	10/100Base-T Ethernet/WLAN (802.11b/g/n)
e. Power Supply	100-240 VAC, output rating 250W
f. Rugged Features & Testing	MIL-STD 810G shock, vibration, temperature, altitude, and humidity IEC60529 IP5X for dust
g. Environmental Specification	Operating Temp: 0 to 60 degrees C (32 to 140 degrees F) Storage Temp: -51 to 71 degrees C (-59 to 159 degrees F)

Figure III-11-4

WPCST Required Software Components

Peripheral Device Function		
(a)	Windows XP	3 rd Party Supplied
(b)	MS Retail v2.0	3 rd Party Supplied
(c)	Trend Micro Enterprise Security for Endpoints Advanced	3 rd Party Supplied
(d)	SQL Server 2000 CALs	3 rd Party Supplied
(e)	Contractor CST Application	Contractor Supplied
Support Components/Device other than those supplied with peripheral device		
(f)	Wireless Modem	Supplied by service provider

11.4.2 Customer Interface Unit

The CST customer interface unit shall consist of the following:

- (a) Customer data entry/PIN pad connected to the CST via a flexible cable.
- (b) The pad shall be a DES/UKPT encrypting numeric keypad for PIN entry.
- (c) EMV compliant magnetic stripe card reader.
- (d) Privacy hood or shield to protect the privacy of PIN code entry.
- (e) Display to prompt the customer and to indicate the amounts being charged to their credit or debit cards. The display shall indicate that PIN entries are being made with * but shall not record the characters being entered.

11.4.3 Cash Drawer

The CST shall provide a uniquely keyed, lockable cash drawer attached to or detached from the CST unit.

- (a) The cash drawer shall be designed and constructed to be pry-proof to prevent unauthorized entry when closed and locked.
- (b) If a separate device from the CST, the cash drawer shall withstand a drop on any corner or side from a height of 2.5 feet onto a concrete floor when containing a full compliment of bills and coins.
- (c) The drop incident shall not cause the cash drawer to open and shall leave the drawer operational.
- (d) The drawer shall contain a removable subdivided tray for currency, coin, checks and other documents received by the operator.

- i. The tray shall have the capacity to separately store a minimum of 80 bills of each of 4 US currency denominations and a minimum of 60 coins of each of 5 US coin denominations (including SBAs, quarters, dimes, nickels, and pennies) in compartments sufficiently sized for these items.
- ii. The tray shall also contain two compartments of 4 inches by 6 inches and a minimum of 1 inch deep to accept paper documents.

11.4.4 Receipt Printer

The CST and WPCST shall include a Receipt Printer as an integral part of the device or as a stand-alone device that interfaces with the CST or WPCST through a standard communications port.

- (a) The receipt printer shall include a roll-type receipt paper feed a thermal printer.
- (b) Receipt information shall be software programmable.
- (c) Each Receipt Printer shall be configured to print duplicate receipts with signature lines for credit card transactions.
- (d) Printed characters shall be in black print, smudge resistant when handled immediately by the operator or customer.
- (e) Receipt printing for any type of transaction shall take no longer than 4 seconds.

11.4.5 Photo Identification System

The CST and WPCST shall include capabilities to print a photo on to special fare cards categories in support of the RRFP or other photo/ID programs.

- (a) The photo identification (ID) system shall consist of the following components:
 - i. Digital camera
 - ii. Application software
 - iii. Card printer
 - iv. Card lamination unit, if required
- (b) The photo ID system shall process and print the image on to the fare card at a maximum of five (5) minutes.
- (c) Once the printing process is completed the image shall be smudge proof and permanent for the life of the fare card. The image may be laminated with a clear plastic sheathing as protection.
- (d) The photo ID system shall be able to operate on CST and WPCST hardware platforms.

- (e) A single photo ID system shall be accessible from multiple CSTs through an Agency's network when operated in an Agency CSO.
- (f) For the WPCST, transfer of digital photographs from a digital camera in the field, and association of the photographs with the corresponding customer records.
- (g) For the WPCST, transfer of captured data and images to the RFCS clearinghouse upon connection of the laptop computer to the RFCS network at the Agencies facilities.

11.4.6 Card Dispenser

- (a) The card dispenser shall be capable of independently distributing two (2) different card products including the fare card and disposable fare card.
- (b) The card dispenser shall be housed in a secure, lockable housing.
- (c) A means shall be provided for keeping the card stock unexposed and secure at all times outside of card stock replacement actions.
- (d) Each card dispenser magazine shall be capable of holding a minimum 300 fare cards.
- (e) The cards shall be dispensed in an automatic fashion upon the receipt of payment at the CST for a card sales transaction.
- (f) Dispensing time shall be one (1) second or less.

6.III-11.5 Electrical Requirements - CST

In the event of a power interruption, a rechargeable dry or sealed gel cell battery source (or UPS) shall provide auxiliary power to the CST for a minimum of 10 minutes of full operation. And at the end of the 10 minutes, complete the transaction in progress and allow for orderly shutdown of the CST, including transmitting all audit data and alarm conditions to the clearinghouse.

6.III-11.6 Environmental Requirements - CST and WPCST

The CST and WPCST shall be designed to operate in the environmental conditions provided in Figure III-11.3.

**Figure III-11.5
OPERATING ENVIRONMENT**

	Customer Service Terminal Standard	Wireless Portable CST
Temperature Range:	Climate controlled office environment and WSF toll booths	See Figure III-11. 3 (g)
Humidity:	Climate controlled office environment and WSF toll booths	See Figure III-11-3 (f)
Shock:	Minimum 20g non-operating, 2.5g operating.	See Figure III-11-3 (f)
EMI:	Applicable FCC requirements	<ul style="list-style-type: none"> • Applicable FCC Requirements • 3rd Party equipment – Manufacturers' EMI specifications
Other (dust, grit, rain/water protection):	Climate controlled office environment	See Figure III-11-3 (f)

6.III-11.7 Data Exchange Requirements - CST and WPCST

- (a) CST event and transaction data shall be transferred to/from the clearinghouse via an Agency provided communications network.
- (b) WPCST event and transaction data shall be transferred to/from the clearinghouse via the Agency's communication network
- (c) Data back-up features shall be included to maintain the integrity of all data stored in the CST Application in the event of system or component failure.

6.III-11.8 Installation Requirements - CST and WPCST

- (a) The Contractor shall install and setup all elements of the CSTs in the designated customer service offices.
- (b) To the extent practical, the CST equipment shall be secured to prevent theft or damage.
- (c) The Contractor shall make all connections to power and communications, all connections between CST elements, and route all cables neatly and out of the way.
- (d) The Contractor shall install the WPCST and its peripherals to an Agency-provided portable cart.

6.III-11.9 Additional Security Requirements - CST

11.9.1 Alarms

- (a) The CST shall be provided with an alarm that notifies the clearinghouse when an unauthorized entry occurs.
- (b) Both the alarm and method of activation/deactivation shall be subject to Program Manager approval.

11.9.2 Keys

The Contractor shall provide to the Contract Administrator five (5) sets of all CST keys a minimum of 60 days prior to the delivery of the first CST.

6.III-11.10 Agency Specific Requirements

11.10.1 (This section intentionally left blank. Section deleted per Change Order No. 5)

11.10.2 Portable CST Application (Option) (NOTE – Section deleted per Change Order No. 49) Requirements included in CST section 6.III-11

3.0 Schedule of Work

3.1 The Contractor will complete the work described in Sections 2.0 and 3.0 in Maintenance Release 19.

4.0 Compensation Changes

4.1. Division 1 Exhibit 9, Price Schedule is hereby amended without further execution as provided in Amendment 211, attached hereto as "Change Order 49 – Attachment A", to add a new Special Program to provide for the fixed compensation due for all the Work of this Change Order in the amount of \$125,853. The Exhibit 9, Price Schedule update to add the WPCST equipment has been processed via a separate Amendment 218.

5.0 Other Terms and Conditions

Except as expressly amended by this Change Order, the Contract remains in full force and effect. All other provisions of the Contract not referenced in this Change Order 49 shall remain in effect unless modified in other executed Amendments and Change Orders.

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 49 to Contract #229944 as of the date set forth below its signature.

Vix Technology (USA) Inc.

By: [Signature]

Its: GENERAL MANAGER

Date: 1/9/13

The Agencies

By: _____

Their: _____

On behalf of the Agencies

Date: _____

Central Puget Sound Regional Transit Authority

By: _____

Its: _____

Date: _____

City of Everett

By: _____

Its: _____

Date: _____

King County

By: _____

Its: _____

Date: _____

Kitsap County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Pierce County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Snohomish County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Washington State Ferries, acting through the Washington State Department of Transportation Ferries Division ("Washington State Ferries")

By: _____

Its: _____

Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 49 to Contract #229944 as of the date set forth below its signature.

Vix Technology (USA) Inc.

By: [Signature]
Its: General Manager
Date: 1/09/13

The Agencies

By: _____
Their: _____
On behalf of the Agencies
Date: _____

Central Puget Sound Regional Transit Authority

By: [Signature]
Its: CEO
Date: 1-14-13

City of Everett

By: _____
Its: _____
Date: _____

King County

By: _____
Its: _____
Date: _____

Kitsap County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Pierce County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Snohomish County Public Transportation Benefit Area

By: _____
Its: _____
Date: _____

Washington State Ferries, acting through the Washington State Department of Transportation Ferries Division ("Washington State Ferries")

By: _____
Its: _____
Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 49 to Contract #229944 as of the date set forth below its signature.

Vix Technology (USA) Inc.

By: [Signature]

Its: General Manager

Date: 1/09/13

The Agencies

By: _____

Their: _____

On behalf of the Agencies

Date: _____

Central Puget Sound Regional Transit Authority

By: _____

Its: _____

Date: _____

City of Everett

By: _____

Its: _____

Date: _____

King County

By: [Signature]

Its: for

Date: 1/16/13

Kitsap County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Pierce County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Snohomish County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Washington State Ferries, acting through the Washington State Department of Transportation Ferries Division ("Washington State Ferries")

By: _____

Its: _____

Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 49 to Contract #229944 as of the date set forth below its signature.

Vix Technology (USA) Inc.

By: [Signature]

Its: General Manager

Date: 1/09/13

The Agencies

By: _____

Their: _____

On behalf of the Agencies

Date: _____

Central Puget Sound Regional Transit Authority

By: _____

Its: _____

Date: _____

City of Everett

By: _____

Its: _____

Date: _____

King County

By: _____

Its: _____

Date: _____

Kitsap County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Pierce County Public Transportation Benefit Area

By: [Signature]

Its: Acting CEO

Date: 1-22-13

Snohomish County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Washington State Ferries, acting through the Washington State Department of Transportation Ferries Division ("Washington State Ferries")

By: _____

Its: _____

Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 49 to Contract #229944 as of the date set forth below its signature.

Vix Technology (USA) Inc.

By: [Signature]

Its: General Manager

Date: 1/09/13

The Agencies

By: _____

Their: _____

On behalf of the Agencies

Date: _____

Central Puget Sound Regional Transit Authority

By: _____

Its: _____

Date: _____

City of Everett

By: _____

Its: _____

Date: _____

King County

By: _____

Its: _____

Date: _____

Kitsap County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Pierce County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Snohomish County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Washington State Ferries, acting through the Washington State Department of Transportation Ferries Division ("Washington State Ferries")

By: [Signature]

Its: WSDOT Assist. Sec. For WSF

Date: JAN. 25, 2013

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 49 to Contract #229944 as of the date set forth below its signature.

Vix Technology (USA) Inc.

By: [Signature]

Its: General Manager

Date: 1/09/13

The Agencies

By: _____

Their: _____

On behalf of the Agencies

Date: _____

Central Puget Sound Regional Transit Authority

By: _____

Its: _____

Date: _____

City of Everett

By: [Signature]

Its: Transportation Services Director

Date: 1-16-13

King County

By: _____

Its: _____

Date: _____

Kitsap County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Pierce County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Snohomish County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Washington State Ferries, acting through the Washington State Department of Transportation Ferries Division ("Washington State Ferries")

By: _____

Its: _____

Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 49 to Contract #229944 as of the date set forth below its signature.

Vix Technology (USA) Inc.

By: [Signature]

Its: General Manager

Date: 1/09/13

The Agencies

By: _____

Their: _____

On behalf of the Agencies

Date: _____

Central Puget Sound Regional Transit Authority

By: _____

Its: _____

Date: _____

City of Everett

By: _____

Its: _____

Date: _____

King County

By: _____

Its: _____

Date: _____

Kitsap County Public Transportation Benefit Area

By: [Signature]

Its: Executive Director

Date: 1/15/13

Pierce County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Snohomish County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Washington State Ferries, acting through the Washington State Department of Transportation Ferries Division ("Washington State Ferries")

By: _____

Its: _____

Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Change Order No. 49 to Contract #229944 as of the date set forth below its signature.

Vix Technology (USA) Inc.

By: [Signature]

Its: General Manager

Date: 1/09/13

The Agencies

By: _____

Their: _____

On behalf of the Agencies

Date: _____

Central Puget Sound Regional Transit Authority

By: _____

Its: _____

Date: _____

City of Everett

By: _____

Its: _____

Date: _____

King County

By: _____

Its: _____

Date: _____

Kitsap County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Pierce County Public Transportation Benefit Area

By: _____

Its: _____

Date: _____

Snohomish County Public Transportation Benefit Area

By: [Signature]

Its: Emmett Heath, Director of Administration

Date: 1-18-2013

Washington State Ferries, acting through the Washington State Department of Transportation Ferries Division ("Washington State Ferries")

By: _____

Its: _____

Date: _____

Change Order No. 49 - Attachment A

Amendment 211 to the Contract for the Design, Implementation, Operation and Maintenance of the Regional Fare Coordination System

This Amendment 211 to the Contract for the Design, Implementation, Operation and Maintenance of the Regional Fare Coordination System is entered into this _____ day of _____, 2013, by and between Vix Technology (USA) Inc (formerly known as ERG Transit Systems (USA) Inc), a California corporation and wholly owned subsidiary of Vix Mobility Pty Ltd, an Australian corporation, (hereinafter referred to as the "Contractor") and each of the following seven public transportation agencies (hereinafter referred to individually as an "Agency" or collectively as the "Agencies"):

1. Central Puget Sound Regional Transit Authority ("Sound Transit")
2. King County ("King County")
3. Kitsap County Public Transportation Benefit Area ("Kitsap Transit")
4. Pierce County Public Transportation Benefit Area ("Pierce Transit")
5. Snohomish County Public Transportation Benefit Area ("Community Transit")
6. City of Everett ("Everett")
7. State of Washington, acting through the Washington State Department of Transportation, Washington State Ferries Division ("WSF")

Recitals

- A. Effective April 29, 2003, each of the Agencies and the Contractor entered into Contract #229944 ("Contract") to implement a Regional Fare Coordination System ("RFC System") to establish a common fare system utilizing smart card technology. The Contractor is responsible for the development, implementation, operation and maintenance of the RFC System as specified in the Contract.
- B. The Agencies and the Contractor desire to amend the "Special Programs" list in Section VI Implementation of Exhibit 9, Price Schedule, in connection with the Work described in Change Order 49 to which this Amendment is attached.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the sufficiency of which is hereby acknowledged, the Agencies and the Contractor hereby agree to amend the Contract as follows:

Section 1.0

Section VI Implementation Special Programs of Exhibit 9, Price Schedule is hereby amended to add the following:

**VI. IMPLEMENTATION
SPECIAL PROGRAMS**

LUMP SUM COST

Change Order No. 49/Amendment 211

Perform the work necessary to develop a wireless portable customer service terminal	
TOTAL	\$125,853